

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 11850 (1998): Automotive Vehicles - Odometer Systems -
Method of Evaluation [TED 4: Automotive Braking Systems]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



भारतीय मानक
स्वचल वाहन — ओडोमीटर प्रणाली —
मूल्यांकन पद्धति
(पहला पुनरीक्षण)

Indian Standard
AUTOMOTIVE VEHICLES — ODOMETER SYSTEMS —
METHOD OF EVALUATION
(*First Revision*)

ICS 43.040.30

© BIS 1998

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Automotive Vehicles Testing and Performance Evaluation Sectional Committee had been approved by the Transport Engineering Division Council.

This standard was first published in 1986 and the revision has been undertaken to update its contents based on the experience gained over the years in the usage of it.

The odometer fitted on an automotive vehicle is one of the important instruments on the dashboard and indicates not only the distance travelled but also assists the driver in assessing the fuel consumption of the vehicle. Both these parameters guide the vehicle user in the maintenance schedules and also in the measurement of the rate of fuel consumption. Hence the accuracy of this instrument is of paramount importance. Method of fuel consumption rate is one of the important parameter for the judging the performance of the vehicle and this revision is an important adjunct to it. Earlier standard covered only four wheelers and this revision has been undertaken to include two and three wheelers also.

The committee responsible for the preparation of this standard is given in Annex A.

In reporting the results of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'.

*Indian Standard***AUTOMOTIVE VEHICLES — ODOMETER SYSTEMS —
METHOD OF EVALUATION***(First Revision)***1 SCOPE**

This standard specifies the method of evaluation of odometer system fitted on all types of vehicles.

2 PREPARATION OF THE VEHICLE

2.1 The vehicle shall conform in all its parts, components and systems to the design and/or production series as applicable.

2.2 The vehicle shall be run in accordance with the practice recommended by the manufacturer.

2.3 The vehicle shall be loaded to the maximum total weight specified by the manufacturer and the load distribution amongst axles shall be as specified by the manufacturer.

2.4 The vehicle shall be fitted with tyres which have not covered more than 10 percent of their expected life. Tread depth measurement may be used to assess the tyre life. The tyres shall be inflated in cold condition to the pressure as recommended by the vehicle manufacturer corresponding to the maximum total weight.

2.5 Prior to testing, it shall be ensured that all instruments mounted on the vehicle shall not hamper the visibility or freedom of the driver to have proper control of the vehicle at all the times.

3 EVALUATION OF CALIBRATION

3.1 The vehicle shall be driven on a test track or on a roadway (such as national highway). The actual distance covered shall not be less than:

10 km, if the least count of odometer is less than 1 km, and

30 km, if the least count of odometer is equal to or more than 1 km.

Prior to testing it shall be ensured that the last digit of the odometer shall just reach the next digit and the same shall be noted as initial reference point.

3.2 The actual distance travelled may be ascertained by either of the following methods:

- a) By recording the actual distance travelled by the vehicle, by using instruments such as fifth wheel or contactless distance measuring system. In that case, the test shall be conducted in such a way that at the end of the test, the last digit of the odometer shall be at the initial reference point.
- b) By driving the vehicle between two fixed marks on the test track, the distance between which has already been established. The vehicle shall be continued to be driven till the last digit of the odometer reaches the initial reference point and this distance shall be measured by a tape and added to the distance travelled. The distance indicated on the odometer shall also be recorded.

3.3 The test shall be carried out twice in accordance with 3.1 and 3.2 and each one shall be considered as one pass.

3.4 Odometer error shall be calculated as under:

$$\text{Odometer error, percent} = \frac{\begin{array}{l} \text{Sum of indicated} \\ \text{distance on odometer} \\ \text{for two passes minus} \\ \text{sum of actual} \\ \text{distances travelled} \\ \text{for two passes} \end{array}}{\begin{array}{l} \text{Sum of actual} \\ \text{distances travelled} \\ \text{for two passes} \end{array}} \times 100$$

3.5 The odometer error shall not exceed ± 10 percent.

ANNEX A

(Foreword)

COMMITTEE COMPOSITION

Automotive Vehicles Testing and Performance Evaluation Sectional Committee, TED 8

Chairman

SHRI R. RAMAKRISHNAN
28, 1 Cross Road, Kasturi Bai Nagar, Adyar,
Chennai 600020

Members

SHRI R. C. BALAKRISHNAN
SHRI RAJAT NANDI
SHRI S. G. SHAH (*Alternate*)
SHRI V. K. BHATIA
SHRI HIRA LAL (*Alternate*)
SHRI P. N. RANGAN
SHRI K. E. TAKAVALE (*Alternate*)
SHRI T. M. BALARAMAN
SHRI V. M. MANEL (*Alternate*)
SHRI V. M. MUNDADA
SHRI R. M. KANITKAR (*Alternate*)
SHRI R. S. DASS
SHRI M. L. MEHTA (*Alternate*)
SHRI S. R. TAPADE
SHRI P. C. BARIATIA (*Alternate*)
SHRI P. K. SAHA
MAJOR BALWINDER SINGH (*Alternate*)
SHRI P. K. SHARMA
SHRI D. B. JAIN
SHRI S. K. GAUTAM (*Alternate*)
SHRI S. K. BHARU
SHRI R. K. TRIPATHI (*Alternate*)
SHRI K. C. JAIN
SHRI R. K. GUPTA (*Alternate*)
SHRI P. V. BHANDARE
SHRI S. B. GUPTA
SHRI HARJEET SINGH (*Alternate*)
SHRI U. K. KINI
SHRI M. G. JHINGRAN (*Alternate*)
DR K. K. GANDHI
SHRI MUKESH SAXENA (*Alternate*)
SHRI I. V. RAO
SHRI B. S. KAUSTUBAN (*Alternate*)
SHRI J. K. MUKHERJEE
SHRI Z. A. MUJAWAR (*Alternate*)
SHRI S. N. SRINIVASAN
SHRI K. D. DIGHE (*Alternate*)
SHRI V. MATHUR
SHRI N. RANGANATHAN (*Alternate*)

Representing

Ashok Leyland Ltd, Chennai
Association of Indian Automobile Manufacturers, New Delhi
Association of State Road Transport Undertakings, New Delhi
Automotive Research Association of India, Pune
Bajaj Auto Ltd, Pune
Bajaj Tempo Ltd, Pune
Central Farm Machine Training and Testing Institute, Budni
Central Institute of Road Transport, Pune
Controllorate of Quality Assurance Vehicles, Ministry of Defence,
Ahmednagar
Daewoo Motors Ltd, New Delhi
Directorate General of Supplies and Disposals, New Delhi
Department of Industrial Development, Ministry of Industry,
New Delhi
Escorts Ltd, Faridabad
Kinetic Engineering Ltd, Pune
Hero Honda Motors Ltd, New Delhi
Hindustan Motors Ltd, Hooghly
Indian Institute of Petroleum, Dehra Dun
Maruti Udyog Ltd, Gurgaon
Mahindra and Mahindra Ltd, Nasik
Premier Automobiles Ltd, Mumbai
Royal Enfield Motors Ltd, Chennai

(Continued on page 3)

(Continued from page 2)

Members

DR Y. SATYANARAYANA
 SHRI M. L. GORE (*Alternate*)
 SHRI LAKHINDER SINGH
 SHRI S. R. AGRAHARI (*Alternate*)
 SHRI A. T. PATHAK
 SHRI A. V. KRILAHARNI (*Alternate*)
 SHRI R. C. SETHI
 SHRI R. RAJARAM (*Alternate*)
 SHRI M. K. MISHRA
 SHRI R. G. KARAMORE (*Alternate*)
 SHRI A. R. GULATI,
 Director (Transport Engg)

Representing

Standing Committee (Technical and Stores) CIRT, Pune
 Swaraj Mazda Ltd, Chandigarh
 Tata Engineering and Loco Co Ltd, Pune
 Vehicle Research and Development Establishment, Ahmednagar
 Vehicle Factory, Ministry of Defence, Jabalpur
 Director General, BIS (*Ex-officio Member*)

Member-Secretary

SHRI M. V. S. D. PRASADA RAO
 Joint Director (Transport Engg), BIS

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards : Monthly Additions'.

This Indian Standard has been developed from Doc : No. TED 8 (260).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 323 01 31, 323 94 02, 323 33 75

Telegrams: Manaksanstha
(Common to
all offices)

Regional Offices:

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg
NEW DELHI 110002

Telephone

{ 323 76 17
323 38 41

Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola
CALCUTTA 700054

{ 337 84 99, 337 85 61
337 86 26, 337 86 62

Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160022

{ 60 38 43
60 20 25

Southern : C. I. T. Campus, IV Cross Road, CHENNAI 600113

{ 235 02 16, 235 04 42
235 15 19, 235 23 15

Western : Manakalaya, E9 MIDC, Marol, Andheri (East)
MUMBAI 400093

{ 832 92 95, 832 78 58
832 78 91, 832 78 92

Branches : AHMADABAD. BANGALORE. BHOPAL. BHUBANESHWAR.
COIMBATORE. FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR.
KANPUR. LUCKNOW. NAGPUR. PATNA. PUNE. THIRUVANANTHAPURAM.